

June 12, 1986

Dear Charlotte:

I am pleased that the paper on privacy is of some use. I will be pleased to send it to anyone else who wants a copy. Enclosed are a dozen copies of the paper for your use.

I also am enclosing copies of two other papers I had written before the privacy article. They touch upon some of the same concerns, but with less frankness. You may, however, find an idea or two of interest.

The privacy paper was published in Educational Communications and Technology, in Fall 1978. The citation is easiest to read at the top of the second page of the article.

With best regards,

A handwritten signature in dark ink, appearing to read "Larry", with a long horizontal stroke extending to the right.

Education, Technology, and Individual Privacy

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The right to privacy is based on a belief in the essential dignity and worth of the individual. Modern technological devices, along with advances in the behavioral sciences, can threaten the privacy of students. Fortunately, invasions of privacy in education have not been widespread. However, sufficient violations have been noted to warrant specific legislation and to promote a sharp increase in attention to procedures that will ensure protection of individual privacy. Technology that can reveal innermost thoughts and motives, or can change basic values and behaviors, must be used judiciously and only by qualified professionals under strictly controlled conditions. Education involves individuals, and educational experimentation is human experimentation. The educator must safeguard the privacy of students and their families.

¹See Grayson (1976) for a discussion of the implication of widescale adoption of instructional technology for maintaining diversity in education.

Computers, video and audio cassettes, cable television, satellites, and other modern communication techniques are being applied throughout the world in an effort to solve educational problems. Modern educational technology, however, involves more than the use of hardware to display materials to students or the use of audiovisual equipment to enhance a lecture. It provides a comprehensive approach to the total process of teaching and learning and uses hardware, course materials, and instructional and management techniques to bring about more effective learning.

Today's technology, which can accurately record, permanently store, promptly retrieve, and widely and quickly communicate sounds, pictures, or written records of any act, event, or information, offers increased opportunities to deliver education whenever and wherever desired. Coupled with recent improvements in hardware are advances in the learning and behavioral sciences which promise to make the instruction delivered more effective.

Modern technology, however, can also more easily transform private experiences into public events. Thus while it makes educational opportunities more widely available and makes education more responsive to individual needs, improper use of technology can infringe on personal rights.¹ Electronic eavesdropping, hidden television monitoring, "truth measurements" by polygraph devices, personality testing, behavior modification, and the rapid expansion of computer-based files of personal information have raised the spec-

ter of new and widespread invasions of privacy, a right that is especially important in education.

Education requires privacy because the independent thought and diversity of view often developed through education are essential to the development of personalities and value structures. As Bloustein (1964) has stated: The person "whose every need, thought, desire, fancy, or gratification is subject to public scrutiny has been deprived of his individuality and human dignity. Such an individual merges with the mass. His opinions, being public, tend never to be different; his aspirations, being known, tend always to be conventionally accepted ones; his feelings, being openly exhibited, tend to lose their quality of unique personal warmth and to become the feelings of every man." The development of independent thought and the shaping of personal values through teaching and learning require that a student have opportunities to test ideas, voice thoughts, practice conduct, and alter opinions before making them public, without fear of ridicule or penalty. A student must be able to make a mistake and, other than on an examination, not have a permanent record made of it, to express ideas and behaviors without having them held up to public scrutiny, and to make responses and not have them used for purposes for which they were not intended, such as for scientific research, or to respond to inquiries from potential employers or from other schools. Without confidence that classroom behavior and responses will not be recorded or exposed outside of class, the classroom environment and the entire educational process would be compromised.

Legislatures and courts have been giving a great deal of attention to protecting the privacy of individuals through safeguards against illegal wiretaps; restrictions on the use of social security numbers for identifi-

cation; prohibition of unauthorized use of income tax, credit, and other records; and regulations against withholding government benefits in order to require recipients to disclose more personal information than is necessary.² In spite of all this activity, only limited attention has been paid to privacy in education, and almost none to the necessity of privacy in the classroom.

Privacy has been defined as the "right to be let alone" (Cooley, 1888) and as the "right to the immunity of the person—the right to one's personality" (Warren and Brandeis, 1890). Individuals have the right to determine when, how, and to what extent they will share themselves with others. It is their right to be free from unwarranted or undesired revelation of personal information to others, to participate or withdraw as they see fit, and to be free of unwarranted surveillance through physical, psychological, or technological means.

In education a person's privacy can be invaded in several ways. It can occur (a) through physical surveillance of individual behavior either directly by teachers, counselors, trained observers, and researchers or indirectly through the use of technological media; (b) by the use of data and existing records for purposes for which they were not originally intended or in ways that were not made known to the subject (the opening of school records to potential employers; the use of teachers' and counselors' comments about a student to create a behavioral profile for research); and (c) through self-revelation done willingly in interviews, questionnaires, and application forms, or unknowingly through attitudinal, psychological, and personality tests and through behavioral science techniques such as sensitivity and encounter groups.

Justice William O. Douglas expressed the concerns of many people when he stated:

We are rapidly entering the age of no privacy; when everyone is open to surveillance at all times; when there are no secrets from the Government . . . (There is) an alarming trend whereby the privacy and dignity of our citizens is being whittled away by sometimes imperceptible steps. Taken individually, each step may be of little consequence. But when viewed as a whole, there begins to emerge a society quite unlike any we have seen—a society in which

²Some proposed legislation, Congressional concerns, and examples of personal information collected by the federal government under threat of civil and criminal sanctions are discussed in *Protecting individual privacy in federal gathering, use and disclosure of information* (Committee on Government Operations, 1974, pp. 3-6, 11-13).

The problem of maintaining the privacy of records becomes more difficult when those records are stored in computer data banks. Diagnostic and prescriptive techniques, for example, usually require information about the individual's past achievements and failures. When these techniques are applied manually, the amount of information involved is limited by the amount with which an individual teacher can deal. As computers are introduced, the amount of information can increase substantially to include the student's total past academic records, detailed evaluations of performance (academic work completed, attendance data, grades, and scores on standardized achievement and intelligence tests), aspirations and goals, psychological and intellectual strengths and weaknesses; health and medical records; and information on family background (home environment and financial situation, student's and parents' attitudes, behavior problems and patterns, opinions) and ratings of counselors and teachers, and observational and anecdotal information. Because the computer can store and analyze information on a scale unthinkable by manual processing, there may be a tendency to gather and retain large amounts of new data which can be made available to anyone. Thus the privacy of the individual is now threatened in a way that was not feasible before. The Family Educational Rights and Privacy Act specifies safeguards but does not eliminate the centralization and proliferation of information about a student nor require an educational institution to assure the accuracy and completeness of its records and the appropriateness of its sources or to create reporting standards.

Computer systems can inflict harm in several ways, such as in the dissemination of data to wider audiences than were originally intended, or in data which may contain factual or contextual errors, perhaps entered into the computer, perhaps by relatively unskilled people who do not have the discrimination or sensitivity to make necessary judgments (Miller, 1972). Further, once the data are entered, the source, purpose, method, and instrument used to gather the data are forgotten, and

the data take on an unwarranted degree of apparent accuracy and completeness.

One major computer-based system that has been in operation since 1970 is the Migrant Student Record Transfer System. Teachers at any of 13,000 participating schools may request from a central computer the cumulative academic and health records of any of about 400,000 children of migrant workers. By entering the child's identification number or name, sex, birthdate, and birthplace at a school terminal that can access by telephone the main computer at the Arkansas State Department of Education, the teacher can receive the requested transcript within a few hours. The system enables educators to plan more effective education programs for migrant children by assuring that their school records are not left behind as their parents move from one harvest area to another, but it has implications for the privacy of the students and their parents. In spite of very conscientious efforts to guard the records, their security depends for the most part upon the privacy policies of the individual schools. Moreover, the completeness, accuracy, and fairness of the file are determined by the data each school supplies using its own standards of judgment. It has already been suggested that this system could be the model for a centralized national data bank containing the records of all American students.⁵ The Arkansas project has demonstrated the technical feasibility of such a system. It could become economically feasible with orbiting satellites used to provide national communications coverage for education.⁶

Another possibility in using telecommunications and a computer properly programmed for instruction (as now used for computer-assisted instruction) is that an

⁵Development and use of the Uniform Migrant Record Transfer System are described in *American Education* (Hogan, 1973; Pfeil, 1970) and in *Education Daily* (1976). Questions about the privacy implications of the system are raised in *The uniform migrant student record transfer system. A position paper* (National Committee on the Education of Migrant Children, 1974).

⁶Educational applications of communication satellites and their economic implications are discussed by Grayson (1972, 1974) and Hupe (1975).

observer in New York could monitor a student taking a computer-presented examination in California, without the knowledge of the student. Furthermore, that observer could modify the examination questions as the student makes successive responses, so that the student could be led through an interview for whatever purposes the observer desired, while the student believed he or she was taking a predetermined computer-given examination for an entirely different purpose. Because the computer could store the complete history of the student's responses and could compare and correlate them with the response histories of other students, this information could later be used to prepare personality profiles, to determine job suitability, or to judge qualifications for security clearance. This does not presume that prudent people will use computers in this way, but rather indicates that vigilance should be maintained to insure that nothing is used in this manner.

A recent trend in higher education is the provision of education at home, at work sites, and at other convenient off-campus locations. Some of these classes are now being implemented through open-broadcast television, and will probably use satellites and cable systems when more widely available. Cable systems have the advantage that they not only provide one-way video, but allow two-way communication between the student and a computer programed to offer instruction. Two-way capability, however, also enables interrogation of up to 180,000 homes every 30 seconds, whether the occupants are engaged in a learning program or not. The channel to which each set is turned can be determined; every request and response made electronically by any individual using any of the sets can be recorded.⁷ The Takanaw Princess Hotel in Tokyo, for example, uses its cable TV system to monitor the contents of in-room refrigerators in order to simplify its billing procedures ("Wired Hotel in Tokyo," 1971).

⁷See Oppenheim (1962) for a discussion of the problems of privacy posed by cable systems.

Two-way audio systems, now common in school buildings, allow school principals either to speak directly to a class or to monitor classroom proceedings, unannounced and unobserved. Rooms equipped for behavioral research which could be used for teacher training, are sometimes constructed with one-way glass windows to allow undetectable observation.

Audio and videotape recorders could also be very intrusive. Microteaching is an established method of teacher training, in which teachers practice various instructional styles or approaches and record themselves and the behavior of their students for later analysis. The tape, however, records all behavior, both desirable and undesirable, and the analysis can be of student behavior as well as of teacher behavior. As Miller (1970) notes, "there might well be a tendency to record atypical responses for purposes of demonstrating the full spectrum of student conduct to a prospective teacher. Thus a very shy or an argumentative pupil might be made the subject of an undue amount of television or video tape study."

In addition to the specific ways that technology can infringe on a person's privacy there is a larger societal problem—the unchallenged acceptance of a technological application because of the ubiquity of the hardware. Prolonged exposure to the technology can have a debilitating effect on attitudes, numbing sensitivity toward invasions of privacy. When this happens, the goals and values of society begin to change in perhaps unplanned and unconscious ways.

BEHAVIORAL SCIENCE AND THE EDUCATOR

Behavioral science, which is assuming an increasing role in educational technology, promises to make educational techniques more effective by recognizing individual differences among students and by patterning instruction to meet individual needs. However, behavioral science is more than an unbiased means to an end. It has a basic value position (Skinner, 1971) based on the premise that such "values as



freedom and democracy, which imply that the individual ultimately has free will and is responsible for his own actions, are not only cultural inventions, but illusions" (Harman, 1970). This position is contradictory to the basic premise of freedom and is demeaning to the dignity of the individual. Behavioral science inappropriately applied can impinge on individual values without allowing for personal differences and in education can violate the privacy of the student.

In sensitivity sessions, teachers encourage students to speak freely about their feelings, beliefs, observations, and reactions to various topics. Students may divulge information that is very personal and private to themselves, their families, and their friends. They may later regret offering this information. Tape recordings of such sessions, however, create a permanent record of the inadvertent remark. The recording may be used at teacher training sessions or even broadcast over an instructional television system for in-service teacher training throughout an entire region. A centralized library of such audio and video tapes would provide easy access for a large number of people and would provide for easy duplication and distribution of the sensitive material.

Enthusiastic educators may be oblivious to the possibility that sensitive data obtained from often naive students, who are expected to make "appropriate" responses, could be used to prejudice students and could cause irreparable harm to them and their families. Professionals in psychiatry and psychology are concerned that too early self-disclosure in group therapy, including some classroom sensitivity sessions, can lead to exclusion of the individual by the group and cause permanent damage (Lewis, 1972).

Reflecting on the ethical values of our civilization in 1958, Pope Pius XII commented:

There is a large portion of his inner world which the person discloses to a few confidential friends and shields against the intrusion of others. Certain (other) matters are kept secret at any price and in regard to anyone. Finally, there are other matters which the person is unable to consider . . . And just as it is illicit to appropriate

another's goods or to make an attempt on his bodily integrity without his consent, so it is not permissible to enter into his inner domain against his will, whatever is the technique or method used.

A key element in any educational scheme is testing.⁸ Most testing, however, is carried out with very little concern for privacy and is often done without parental approval. With the acceptance of psychological testing as part of the educational process, the improvement in data processing and retrieval, the utilization of computers, a growing demand to make education more personal by recognizing and characterizing individual differences, and a blurring of the distinction between counselors and teachers, more information on more students may be made available to more people over longer periods of time. This may jeopardize an individual student's right to privacy.

In a sense, every test can be an invasion of privacy if the person being tested does not want to reveal himself. This is true for ability tests and examinations of knowledge, but the psychological test has more potential for violation of personal rights. Lee J. Cronbach (1960), a leading authority on psychological testing, noted:

Every man has two personalities: the role he plays in his social interactions and his "true self." In a culture where open expression of emotion is discouraged and a taboo is placed on aggressive feelings, for example, there is certain to be some discrepancy between these two personalities. The personality test obtains its most significant information by probing deeply into feelings and attitudes which the individual normally conceals. One test purports to assess whether an adolescent boy resents authority. Another tries to determine whether a mother

⁸Fifteen years ago it was estimated that between 150 and 250 million standardized ability tests were administered annually in the United States by schools, colleges, business and industrial firms, and government agencies, including the military services (see Goslin, 1963, p. 13). Since that time the number of students enrolled in educational institutions has increased from approximately 51 million to almost 63 million. Meanwhile, there has been an increased emphasis on individualized and modularized programming, which requires more testing than traditional approaches. The number of standardized ability tests administered annually has undoubtedly increased substantially.

really loves her child. A third has a score indicating the strength of sexual needs. These, and virtually all measures of personality, seek information on areas which the subject has every reason to regard as private, in normal social intercourse. (pp. 459-460)

Unobtrusive testing (Webb, 1966) is a recent technique that is gaining acceptance for the observation and recording of classroom behavior. Often a small, remotely controlled, TV camera, similar to those used in banks and stores for monitoring customers, is mounted on a wall of the classroom. The observers are located in a second room. At their option, the TV camera may be turned on and maneuvered to scan certain parts of the room or to zoom in on a particular child. The activities of the class or of individuals can be watched on a TV monitor in the remote room and can be recorded on a videotape recorder for later analysis or use. While the children often are aware of the initial placing of the camera in the room, and its use may be explained to them, they quickly become accustomed to the small, unobtrusive device, forget its presence, and assume their usual classroom behavior, uninhibited by the presence of a human observer in the room.

Advances in acoustics, optics, medicine, and electronics, and the development of microminiaturization, chemical synthesis, and projective psychiatry have changed our assumptions as to the circumstances under which our beliefs, speech, and behavior are safe from disclosure, and as to when, to whom, and the extent to which such disclosures shall be made. The portable TV camera, miniaturized microphone and tape recorder, two-way mirror, computer, and validated personality test are commonly used in psychological and behavioral research. Recent work has even demonstrated the potential of computers to read thought patterns in the human mind.⁹ All these devices and techniques are passive in the sense that they can be used to

⁹When a person wears a special helmet, a computer can identify and monitor the electroencephalographic signals (EEG) in the brain that are associated with language. A preliminary version of the system, called *biocybernetic*, can recognize the thought patterns of seven words (see *Computer Decisions*, 1974).

determine information about an individual's personality and to record his actions.

There is another class of techniques which can probe deeply into the inner self and can even be used to change a person's overt behavior. Values Clarification (Simon, Howe, & Kirschenbaum, 1972; Simon & Clark, 1975), an approach to values education, is in this category. Because of the type of information solicited from the student and many of the classroom methods it employs, Values Clarification can infringe on an individual's privacy (Lockwood, 1977). The approach encourages a student to disclose information on a variety of topics including the personal dynamics in his or her family, the student's behavior and emotions, and other matters of a personal nature.¹⁰ It does so by utilizing techniques from projective psychology and group therapy; these techniques can override, bypass, or otherwise interfere with the individual's ability to control the expression of personal information. They are deceptive in trying to discover how students feel about a certain matter without asking them openly. Lockwood concludes that

... a substantial proportion of the content and methods of Values Clarification constitutes a threat to the privacy rights of students and their families . . . This condition is exacerbated by the fact that teachers are not trained in the use of psychologically probing strategies and, particularly in the case of younger children, by the reasonable assumption that students may be unaware of the negative consequences of extensive self-disclosure. (p. 20)

Hypnosis, behavior controlling drugs, surgery, psychotherapy, and conditioning techniques, all of which are used in the behavioral sciences, go a step further because

¹⁰Simon, Howe, and Kirschenbaum (1972) list typical questions used in values clarification, such as: How many of you think parents should teach their children to masturbate? (p. 52) Do you believe in God? (p. 143) What disturbs you most about your parents? (p. 148) Is there something you once did that you are ashamed of? (p. 154) Did you ever cheat on tests? (p. 157) Reveal who in your family brings you the greatest sadness, and why. (p. 181) Tell some ways in which you will be a better parent than your own parents are now. (p. 181) How did you first learn to kiss? (p. 238).

they can be applied systematically to influence values, attitudes, and behavior. This influence can be exercised either by controlling the information processed by the senses so that an individual's own mentality will guide him or her in a desired direction, or by controlling the physical mechanisms that underlie the senses so that a person will respond as desired regardless of the information transmitted to him (London, 1969).

Recent research on the psychiatric effects of various types of encounter group experiences in education, such as psychodrama, Gestalt therapy, marathon, T-group, sensitivity training, transactional analysis, and sensory awareness, indicates that about 10 percent of the people completing these experiences become psychiatric casualties, suffering psychotic decompositions ranging from feelings of inadequacy and a deterioration of interpersonal life, to severe depression and anxiety, to manic psychosis and acute paranoid schizophrenia.¹¹ It is estimated that there are nearly 63 million students in the formal educational institutions of this country in 1978 (National Center for Educational Statistics, 1977), creating a danger that if these techniques are widely used in education, millions of Americans could suffer unnecessary psychic damage. Neither the medical profession, the federal government, nor the public at large would allow a medication that has such a high probability of producing serious side effects to be sold publicly without a warning of the possible effects and without professional control. The education community should not be given liberties in human experimentation that are not allowed other professional groups.

¹¹A task force commissioned by the American Psychiatric Association studied 209 undergraduates who participated in 18 encounter groups, each of which met for 30 hours. Of the 170 people who completed the experience, 16 subjects were considered "casualties," where the definition of casualty was stringent, requiring that: the student underwent some psychological disorder; the disorder was persistent as judged 8 months after the group experience; and there was evidence that the encounter was the responsible agent (see Yalom & Lieberman, 1971).

It is clear that modern technological devices, coupled with advances in the behavioral sciences, provide an enormous threat to the privacy of the individual in an educational setting, as well as many advantages for the betterment of mankind. While most current practices do not appear to have caused any significant amount of violation, a sufficient number of exceptions (particularly in the area of record keeping and computer-based data banks) have been noted to cause specific legislation to be passed and to warrant a sharp increase in attention to procedures that will assure protection of individual privacy. Technology that can reveal innermost thoughts and motives or change basic values and behaviors must be used by qualified professionals under strictly controlled conditions, with the full knowledge and consent of those to be affected.

PROTECTING THE RIGHT

The right to privacy is based on a belief in the essential dignity and worth of the individual. Maintaining one's individuality involves the right to be free from certain types of intrusions and to have personal control over the time, conditions, and extent to which one's thoughts, beliefs, attitudes, opinions, and personal history are to be shared or withheld from others. Without privacy, the concept of individuality is meaningless. It is wrong to invade individual privacy not because of the embarrassment or mental distress that may result, as traumatic as these may be, but because of the affront to dignity and individuality¹² which demeans the person. As the means for developing human capabilities and technology and as a primary force promoting social progress, education must ensure that the rights of the individual, including that of privacy, are preserved.

Many intrusions into personal privacy are not malicious or intentional; they are made by well-meaning teachers trying to do a better job of educating children. Too

¹²The body of laws protecting privacy are analyzed from this point of view by Bloustein (1974).

often, however, the goals and concerns of the community are forgotten as teachers and administrators work with the best of intentions to achieve limited, short term objectives¹³. As Justice Louis Brandeis warned, "The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding" (*Olmstead v. U.S.*, 1927, p. 479). Whatever the motivations of the teacher or researcher, an individual's privacy must take precedence over effective teaching, unless good cause can be shown to do otherwise.¹⁴ Good cause, however, does not relieve the teacher or school administrator from the responsibility of safeguard-

¹³A well known example of well intentioned research in the behavioral sciences that lacked sensitivity to community mores is a "jury bugging" experiment conducted under the auspices of the University of Chicago, in which, unknown to the members of the jury, their deliberation room was wired to record their conversations as part of a study of how juries arrived at verdicts. Financed by a major foundation and conducted by an eminent legal authority (who later became Attorney General of the United States), this was a scientific inquiry conceived and carried out with the best professional motivation and skill. Although the consent, in advance, of the court and of opposing counsel was obtained, the surreptitious probing of the individual and institutional privacy of the members of the jury shocked the community when the experiment became public knowledge in October, 1955. Federal and state statutes were passed in 1956 and 1957 to ban all attempts to record or observe the proceedings of a jury (see Rubenstein & Brim, 1965, p. 1193).

In a Bronx junior high school, researchers administered the probing Minnesota Multiphasic Personality Inventory, on a compulsory basis without parental consent, to an entire ninth grade class. Upon inquiry, an indignant parent was told to "trust the judgment of the educators" (see Miller, 1970, p. 13).

More recently it was suggested that every parolee, bailee, and recidivist would be required to wear a small radio-transponder that would emit a signal every 16 seconds, allowing his whereabouts to be monitored by a computer (see Meyer, 1971).

¹⁴Privacy is a constitutionally protected right; education is not. The Supreme Court ruled in *Griswold v. Connecticut* (decided in 1965) that the right of privacy is guaranteed by the Constitution. In *Rodriguez v. San Antonio independent school district* (decided in 1973), the Court ruled that education is not a protected right under the Constitution.

ing the privacy of the student and his family. Yet, many teachers and administrators remain insensitive to the privacy implications of behavioral science and modern technology in education.

Many educators assume that most parents desire innovation and change, and that if parents resist the proposed change, it is because they do not understand it. This is not true. Students and their parents are not a homogeneous group with respect to the goals and values they hold; their goals and values may vary widely. If anything, the desire of parents for change probably follows a bell shaped curve, with 10 percent strongly advocating change, 10 percent strongly resisting change, and the remaining parents exhibiting varying degrees of ambivalence. On controversial topics, the group is most likely to be polarized into two major, opposite points of view, so that an average position is meaningless. The parents who resist a change often understand its effects.

The introduction of television into the elementary school classroom, for instance, has been resisted by some parents, even though they themselves may use it as an electronic babysitter at home. These parents understand that TV gives the teacher a new resource to enrich and improve the curriculum. The parents also realize that they may lose control over selection of the programs their children watch and that the teacher may select programs (such as sex education shows) that may transmit values that conflict with those the parents want to instill in their children. However, in dealing with sensitive subjects that the community agrees should be taught, technology can help. Videotaped programs could be previewed by parents and school authorities, and decisions made about the appropriateness of the material. In this way, parents could have more control over their children's experiences, because the teacher would no longer be the only person to determine what is to transpire in the classroom.

Psychological testing, sensitivity training, role playing, life-death games, diary keeping, and other techniques of the psychological and behavioral sciences are also generating enormous controversy in many

communities. That groups of parents opposing these techniques are not ignorant about them is evident from their testimony before school boards.¹⁵ Rather, these educational practices are being opposed because the parents consider them to be threatening to parental rights and capable of use to modify their children's established values or to impart new values to them in a way that conflicts with the values established at home according to family background, culture, or religious belief.¹⁶

Intent on improving education, educators, scientists, and others concerned with the development and application of technology are often insensitive to the issues of privacy raised by the use of their techniques. For example, many psychological and behavioral practices have been introduced on the ground that they will make education more efficient or effective. However, improvements in efficiency through technological applications can reinforce these practices without regard to their effects. Much of what is now being done in education could be wrong, especially if carried out on a massive scale. As the use of technology becomes more widespread, we may reach the point where errors cannot be detected or corrected. This is especially important because technology interacts with society and culture to change established goals and values. Propagating an error on a national level could change the original goals to fit the erroneous situa-

tion. The error then becomes acceptable by default.

Supreme Court Justice William O. Douglas expressed his concern about the effects technology can have on the rights of the individual as follows:

Such practice can only have a damaging effect on our society. Once sanctioned, there is every indication that their use will indiscriminately spread. The time may come when no one can be sure whether his words are being recorded for use at some future time; when everyone will fear that his most secret thoughts are no longer his own, but belong to the government; when the most confidential and intimate conversations are always open to eager, prying ears. When that time comes, privacy, and with it liberty, will be gone. (*Osborn v. U.S.*, 1966, pp. 353-354)

Fortunately, many threats to education are still only possibilities. There is time to take corrective action before they become widespread. Our ability as a society to protect the privacy and dignity of the individual as technological advances are made depends on our ability to identify the issues involved, develop public awareness, establish codes of professional ethics, pass legislation, and develop legal mechanisms to remedy abuses.¹⁷ In developing and applying technology to education, potential effects must be analyzed, so that negative possibilities can be identified and overcome before major resources are committed to projects that could produce undesirable long-term social consequences.

Too often education is viewed as an abstract or generalized process. However, education involves individuals, and educational experimentation is human experimentation. The educator is responsible for protecting the well-being of the student.

In matters affecting privacy it is better to err on the side of the individual, than on that of research or improved educational practice. Violations of privacy can never be fully redressed. While there should be a balance between individual rights and community interests, that balance should be tipped in favor of the individual. We should provide the maximum protection for privacy that our society can endure and still function as a free society.

¹⁵Numerous complaints about the federal government's role in developing and promoting textbooks and other curriculum materials and behavior modification techniques led to a study titled *Questions persist about federal support for development of curriculum materials and behavior modification techniques used in local schools* (Comptroller General of the United States, 1977).

¹⁶In California, Citizens for Parental Rights took legal action against the San Mateo County Board of Education on the constitutionality of its family life and sex education programs. The parents claimed that through this curriculum the schools are: (1) undermining parental authority; (2) invading the privacy of the home; (3) invading the privacy of the mind of the child; (4) interfering with the free exercise of religion; and (5) establishing a secular religion. Groups of parents in other states have taken both administrative and legal action against their local school boards for similar reasons.

¹⁷Legal and ethical protection for privacy are discussed in Westin (1970).

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